BORODINA, T.R., kand. sel'skokhoz. nauk

Using esters of 2,4-D. Zashch. rast. ot vred. i bol. 9 no. 5:28-29 '64. (MIRA 17:6)

1. Gosudarstvennyy nauchno-issledovatel'skiy institut Grazhdanskogo vozdushnogo flota.

BORODINA, V.; IVANOVA, Z.; MEN'SHIKOVA, A.; ORLOV, P.

Your civic duty. Fin.SSSR 37 no.2:11-14 F '63. (MIRA 16:2)

1. Starshiye inspektora Leningradskoy kontory Stroybanka (for Borodina, Ivanova). 2. Starshiye inzhenery Leningradskoy kontory Stroybanka (for Men'shikova, Orlov).
(Leningrad--Banks and banking)
(Leningrad--Construction industry--Auditing and inspection)

SOKOLOV, M.A.; BORODINA, V.A.; ROMANENKO, V.T.

Investigations on the recovery of thallium from complex ores.
Izv.AN Kazakh.SSR.Ser.met.obog.i ogneup. no.2:3-7 '60.
(MIRA 13:8)

(Thallium) (Flotation)

BORODINA, V.A.

Improving the technology of Tokeli deposit ore dressing. Trudy Inst. met. i obogashch. AN Kazakh. SSR 3:76-84 '60. (MIRA 14:6)
(Tokeli (Aktyubinsk Province)--Ore dressing)

BORODINA, V.A.; SOKOLOV, M.A.

Making complete use of copper sulfide ores during treatment.
TSvet.met. 38 no.10:9-11 O '65.

(MIRA 18:12)

BORODINA, V.N.; LEVINA, A.Yu.; TOLSTAYA, S.N.; TAUBMAN, A.B.; Prinimala uchastiye: NIKIFOROVA, A.P.

Adsorption activation of kaolin as a rubber filler. Kauch.i rez. 24 no.1:15-18 Ja '65. (MIRA 18:3)

1. Institut fizicheskoy khimii AN SSSR i Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnykh materialov i iskusstvennoy kozhi.

BORODINA, V.N., inzh.; MONASTYRSKAYA, M.S., kand. tekhn. nauk dots.; YANOVA, L.P., kand. khim. nauk; PAVLOV, S.A., doktor tekhn. nauk prof.

Effect of ionizing radiation on the structural and mechanical properties of polyvinyl chloride. Izv. vys. ucheb. zav.; tekh. leg. prom. no.4:85-93 '59. (MIRA 13:2)

1.Moskovskiy tekhnologicheskiy institut legkoy promyshlennosti. Rekomendovana kafedroy tekhnologii iskusstvennoy kozhi.
(Vinyl chloride)

S/020/62/142/002/027/029
B101/B144

AUTHORS: Taubman, A. B., Tolstaya, S. N., Borodina, V. N., and Mikhaylova, S. S.

TITLE: Adsorptive modification of fillers and pigments and structure formation in polymer solutions

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 142, no. 2, 1962, 407-410

TEXT: The change in hydrophilic properties of mineral fillers due to oriented adsorption of surfactants was investigated. The experiments were conducted: (A) with 0.5% toluene solution of CKC-30 (SKS-30) rubber, filled with kaolin; (B) with 1.2% toluene solution of perchloro vinyl resin (PCVR), filled with TiO_2 (polymer-to-filler ratio = 1:80); (C) with 1.2% of dichloro ethane solution of PCVR, filled with TiO_2 (ratio 1:40). The change in static shear stress P_m was measured with a Veyler-Rebinder apparatus with addition of a surfactant (octadecyl amine (I) or stearic acid (II)), and the tensile strength of SKS-30 rubber samples, filled with activated kaolin (90 parts by weight of kaolin per 100 parts by weight of rubber) and vulcanized for 60 min at 140°C and 27 kg/cm^2. For the ultraviolet-irradi-

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Adsorptive modification of ...

ated PCVR samples, "chalking" owing to the decomposition of the film and to the emergence of TiO_2 to the surface was measured photometrically by S. V. Yakubovich and V. A. Zubchuk, using a method of GIPI-4. The degree of adsorption of the surfactant by the filler was determined by photometric measurement of the methylene blue adsorption on the surface not occupied by surfactants. A maximum was found for $P_m = f(C_{surfactant})$ in all the experiments. For SKS-30 rubber filled with kaolin and activated with 2% I, P_m increased from 170 to 670 dynes/cm^2, while it dropped at a higher concentration of I. The maximum of tensile strength P_t lay at the same surfactant concentration which corresponds to the P_m maximum. A similar effect of I was observed with PCVR (P_m increased from 150 to 330 dynes/cm^2), however, the optimum concentration of I was 0.2%. The "critical range" of occupation of the filler surface by an adsorbed surfactant, within which structuralization occurs, was very narrow. In the case of kaolin, the occupation was about 50%. In addition, the filler particles must be modified by irreversible chemosorption. II, which is reversibly adsorbed by kaolin, showed no structuralizing effect with rubber. When I and II were added simultaneously, the P_m in the maximum dropped from 670 to 280 dynes/cm^2, its position remaining unchanged at 2% I. For amphoteric

TiO_2, II was also effective. The optimum lay here at 0.080% II (350 dynes/cm^2). The experimental series C showed the specific effect of the solvent. In dichloro ethane, a minimum of P_m occurred at 0.2%I. The intensity of chalking was lowest at the P_m optimum where the linkage between pigment and polymer is hightest. There are 2 figures and 9 references: 8 Soviet and 1 non-Soviet. The reference to the English-language publication reads as follows: P. Rehbinder, Discuss. Farad. Soc., 18, 151 (1954).

ASSOCIATION: Institut fizicheskoy khimii Akademii nauk SSSR (Institute of Physical Chemistry of the Academy of Sciences USSR)

PRESENTED: August 15, 1961, by P. A. Rebinder, Academician

SUBMITTED: August 15, 1961

L 25263-65 EWT(m)/EWP(j)/T Pc-4 RM

ACCESSION NR: AP5002922 S/0138/65/000/001/0015/0018

AUTHOR: Borodina, V.N.; Levina, A. Yu.; Tolstaya, S.N.; Taubman, A.B.

TITLE: The adsorptive activation of kaolin as a rubber filler

SOURCE: Kauchuk i resina, no. 1, 1965, 15-18

TOPIC TAGS: synthetic rubber, rubber filler, kaolin, kaolin activation, adsorptive activation, surfactant, butadiene styrene rubber, film strength, rubber additive

ABSTRACT: Activation of kaolin by surfactants was studied with systems containing toluene, SKS-30 (70:30 butadiene-styrene copolymer emulsion-polymerized at 50C) kaolin and surfactant in order to define the optimum conditions for commercial applications of the method. A Weiler-Rebinder apparatus was used to measure the strength of films formed by 0.5% solutions of SKS-30 rubber in toluene with additions of kaolin and octadecylamine, Katamin ($RC_6H_4CH_2N(C_2H_5)_3Cl$, Katapin ($RC_6H_4CH_2NPhCl$, R = C_{12}-C_{18}), or stearic acid. An optimal increase in strength was found for systems containing 2% octadecylamine, Katamin, or Katapin with respect to kaolin, whereas stearic acid abolished the favorable effects of other surfactants. Activation is shown to involve the irreversible coverage of the kaolin surface by the surfactant, generating, at the optimum

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L 25263-65
ACCESSION NR: AP5002922

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concentration, a mosaic pattern of equal areas of hydrophilic and hydrophobic surfaces. Stearic acid, and to a much lesser degree also such rubber additives as diphenylguanidine, "Rubrax" (rubberized asphalt) and Altax (dibenzthiazyl disulfide), affect the surface pattern of the activated kaolin. Vulcanizates prepared with 90 wt.% activated kaolin had tensile strengths approaching the properties of rubber prepared with colloidal silica, provided no stearic acid was used in the activated kaolin composition. The activated filler was also used with excellent results in industrial tests for producing sole material. "The authors acknowledge the assistance of A. P. Nikiforova in the activation tests, and the supply of surfactants by A. I. Gershenovich and O. K. Smirnov." Orig. art. has: 4 figures and 1 table.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR (Physical chemistry institute, AN SSSR); Vsesoyuznyy nauchno-issledovatel'skiy institut plenochnikh materialov i iskusstvennoy kozhi (All-union film materials and synthetic leather scientific research institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: MT

NO REF SOV: 006 OTHER: 001

Card 2/2

L 52212-65 EWT(m)/EPF(c)/EPR/EWP(j)/T Pc-4/Pr-4/Ps-4 WW/RM

ACCESSION NR: AP5014530 UR/0069/65/027/003/0446/0452
541.182.024:541.64

AUTHOR: Tolstaya, S. N.; Borodina, V. N.; Taubman, A. B.

TITLE: Adsorption activation and reinforcing action of mineral fillers in polymer systems

SOURCE: Kolloidnyy zhurnal, v. 27, no. 3, 1965, 446-452

TOPIC TAGS: polyvinylchloride, butadiene, styrene rubber, filler additive, surface active agent

ABSTRACT: The effect which adsorptive activation of kaolin and precipitated calcium carbonate used as fillers have on their reinforcing action in SKS-30 butadiene-styrene rubber and PF-1 polyvinylchloride was investigated. The modifiers (surface-active agents) used were the cation- and anion-active compounds octadecylamine and stearic, dichlorostearic, and chloropelargonic acid. The interaction of the polymers and fillers was determined from coagulation structure formation (in model systems consisting of suspensions of the fillers in solutions of the polymers being studied) by measuring the breaking point of the static shearing stress P_m. It was

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L 52212-65

ACCESSION NR: AP5014530

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found that the reinforcing act'on of fillers can be improved by using surface-active agents for adsorptive activation. In accordance with the mechanism governing the adsorption activation of hydrophilic mineral fillers, the optimum conditions of activation correspond to incomplete coverage of the surface of solid-phase particles by a polymerophilic adsorption layer which is bound chemically and irreversibly to the surface of the filler. "In conclusion, the authors express their thanks to Acad. P. A. Rebinder for interest shown in this work and for valuable suggestions." Orig. art. has: 7 figures.

ASSOCIATION: Institut fizicheskoy khimii AN SSSR, Moscow (Institute of Physical Chemistry, AN SSSR)

SUBMITTED: 12Sep63 ENCL: 00 SUB CODE: MT

NO REF SOV: 010 OTHER: 002

Card 2/2

BORODINA, V. P.

"Geography of the Agricultural Cooperative Industry of Kirovo-Slobodskaya Rayon." Cand Geog Sci, Moscow State Pedagogic Inst imeni V. I. Lenin, Moscow, 1954. (KL, No 3, Jan 55)

Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (12)
SO: Sum. No. 556, 24 Jun 55

BORODINA, V. V., Cand Vet Sci -- (diss) "Epizootology of Diothyocaulosis and Fascioliasis of Sheep under Conditions of the Kharovsk State Breeding Nursery of Vologodskaya Oblast." Mos, 1957. 15 pp (All-Union Order of Lenin Acad of Agricultural Sci im Lenin, All-Union Inst of Helminthology im Academician K. I. Skryabin), 120 copies (KL, 47-57, 89)

5-4

USSR/Diseases of Farm Animals - Diseases Caused by Helminths. R.

Abs Jour : Ref Zhur - Biol., No 6, 1958, 26322

Author : Borodina, V.V.
Inst :
Title : Conditions and Means of Dictiocaulosis Infection in Sheep.

Orig Pub : Veterinariya, 1957, No 4, 38-40

Abstract : Description of epizootiological observations of dictiocaulosis in adult sheep and lambs in the conditions of Kharovskiy rayon, Vologodskaya oblast', and of experiments in per cutem infection of lambs with infestating larvae of Dictiocaulus filaria. It has been shown that infection of the sheep by dictiocaulosis takes place on pastures by way of swallowing infestating dictiocaulus larvae with grass or with water; the sheep to not become infected through the skin. If the sheep are kept in a hibernating state, dictiocaulosis infection usually does not occur. The majority of infestating D. filaria

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USSR/Diseases of Farm Animals - Diseases Caused by Helminths. R.

Abs Jour : Ref Zhur - Biol., No 6, 1958, 26322

larvae and all non-infestating larvae perish on pastures during the winter. An insignificant part of infestating larvae which preserve their vitality may serve as a source of a new spring infection of the sheep, a fact which should be taken into account in the treatment of sheep on farms where dictiocaulosis occurs.

Card 2/2

BAYDALIN, A.Ya., kand.veterinarnykh BORCHINA, P.V., kand. veterinark

Measures for controlling trichocephaliasis and metastrongylosis in swine. Veterinariia 41 no.10:42-44 O '64.

(MIRA 18:11)

1. Kurskaya oblastnaya nauchno-proizvodstvennaya veterinarnaya laboratoriya.

BORODINA, Ye. I., inzh.

New mechanical pipe screw. Neftianik 5 no.5:20-21 My '60. (MIRA 13:6)

1. Neftepromysl neftepromyslovogo upravleniya Tuymazaneft'.
(Screws)

S/128/60/000/012/003/014
A054/A030

AUTHORS: Chiminov, V.V.; Borodina, Ye.P.

TITLE: Fast-Drying Binding Materials Based on Sulfite-Alcohol Distillation Waste, Type CM-1 (SM-1)

PERIODICAL: Liteynoye proizvodstvo, 1960, No. 12, pp. 10 - 11

TEXT: In cooperation with the Institute of Plastics under the supervision of A.M. Lyass, the TsNIITMASh has developed a new core binding agent (SM-1), by mixing sulfite-alcohol distillation waste with a small amount of technical carbamide. The new binding agent has the same strength and technological properties as the binding material, consisting of the condensation products of carbamide, formaldehyde and sulfite-alcohol distillation waste (МСБ - MSB), developed some time ago by the same institutes, only the SM-1 binding agent can be obtained by a simpler method than the MSB type and does not have the disagreeable smell of this product. The SM-1 binding agent is produced by sprinkling technical carbamide in sulfite-alcohol distillation waste and by stirring until a uniform solution is formed. The optimum strength and technological properties required are obtained by mixing sulfite-alcohol distillation waste and carbamide in a 5 : 1 ratio. Max-

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Fast-Drying Binding Materials Based on Sulfite-Alcohol Distillation Waste, Type CM-1 (SM-1)

imum strength will be obtained with the sulfite-alcohol distillation waste having a specific weight of 1.26 - 1.27 (Fig. 2). With a specific weight under 1.25, the viscosity of the solution decreases, its liquidity improves, but its strength decreases both in humid and in dry condition. By increasing the amount of the binding agent, the strength of dry samples increases and a maximum specific strength is attained with a content of 5% binding agent in the mixture. The influence of clay in the mixture has also been tested. The increase in clay content raises the strength of the binding agent when wet. In the dry samples, an addition up to 3% of clay increases the strength, more than 3% of clay lowers the strength, however. The optimum composition with regard to strength is: 96 - 98; clay 2 - 4; binding agent 5.0 parts by weight. The influence of the drying temperature on the samples was also tested and it was found that the samples would dry in the temperature range 180 - 220°C, but the best indices were obtained with drying at 200°C (Fig. 4). Strength begins to develop already after 3 - 4 min of drying and the maximum strength is obtained after 7 - 10 min. However, the cores having much larger dimensions than the samples, require longer drying: smaller cores about 25 - 35 min, medium sized ones 1.5 - 2 h and large ones 3.5 - 4 h, in

Fast-Drying Binding Materials Based on Sulfite-Alcohol Distillation Waste, Type CM-1 (SM-1)

drying furnaces. The hygroscopicity of the mixture can be reduced by adding petroleum-bitumen, diluted with white spirit or kerosine in a 1 : 1 ratio. The cores can easily be shaken from the castings. In another production-variant for this kind of binding agent carbamide is dissolved in water (up to a 1 : 1 ratio) instead of in the sulfite-alcohol distillation waste (the solution contains 55% water and 45% carbamide). The grinder is filled in the following sequence: sand, clay, sulfite-alcohol distillation waste (specific weight minimum 1.28), and at last, the aqueous solution of carbamide. This process is simpler than the former and, due to the somewhat greater humidity of the mixture, the clay content can be increased. This raises the strength of the mixture at high temperatures. For instance, if the compression strength of the mixture is 4.9 kg/cm^2 at 600°C and 3.1 kg/cm^2 at 800°C, the strength increases to 15 kg/cm^2 at 600°C and 10 kg/cm^2 at 800°C, when adding 5% clay. The new agent was practice-tested in the Kolomensk Diesel Factory imeni Kuybyshev in the production of crankshaft forms and cylinder block cores for of large diesel engines with the following composition: sand 96.0; refractory clay 3.5; binding agent 5.0; bitumen solution 1.0 by weight (bitumen No. 5 with white spirit 1 : 1 ratio was used). The compression strength

Fast-Drying Binding Materials Based on Sulfite-Alcohol Distillation Waste, Type CM-1 (SM-1)

of the samples obtained with the mixture in wet condition was 0.10 - 0.18 kg/cm^2, while the tensile strength in dry condition was 12 - 16 kg/cm^2. The humidity of the samples was 2.0 - 2.5%, their gas-permeability 100. The drying time when using the new binding agent was reduced for the above products from 13 to 6 h, the time for producing the mixture was shortened 1.5 - 2 times. The new binding agent was also tested in the manufacture of various other products and also in mass-production in the Moscow Automobile Factory imeni Likhachev. It was found, in general, that the drying time of cores can be reduced by about 50% when this new binding material is used. Some compositions recommended are:

Quartz sand	Refractory clay	Binding agent	Bitumen solution
100 - 98.5	0 - 1.5	4 - 5	0.5 - 1.0
98.5 - 97.0	1.5 - 3.0	3.5 - 4.0	1.0
97.0 - 96.0	3.0 - 4.0	4 - 5	1.0

Black sand up to 30% and 1% of water can be used. All values stand for parts by weight. There are 4 figures and 1 table.

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S/128/60/000/012/003/014
A054/A030

Fast-Drying Binding Materials Based on Sulfite-Alcohol Distillation Waste, Type CM-1 (SM-1)

Figure 2: Influence of the specific weight of sulfite-alcohol distillation waste on the strength of samples with 5% binding agent.

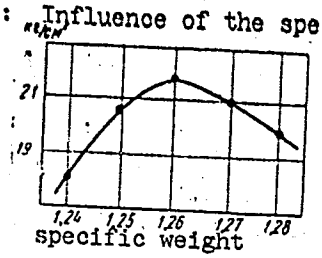
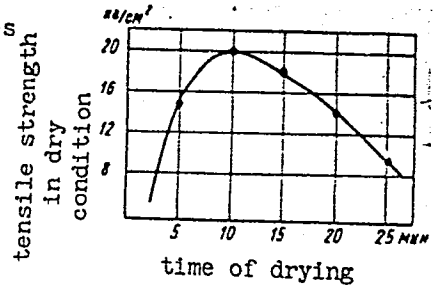


Figure 4: Dependence of the strength of dry samples with 5% binding agent.



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BORODINA, Z.N.

DIKKER, G.L.; DRUZHININA, L.N., kand. tekhn. nauk, dots.; ISKENDEROV, A.A., kand. tekhn. nauk, dots.; KLYUYEVA, T.K., kand. tekhn. nauk, dots.; LOGOTKIN, I.S., kand. tekhn. nauk; MEL'MAN, M.Ye., kand. tekhn. nauk, dots.; MISNIK, I.A., kand. tekhn. nauk; RUSH, V.A., dots.; RUKOSUYEVA, A.N., dots., red.; KAFKA, B.V., prof., retsenzent; FERTMAN, G.I., dots., retsenzent; SOBOLEVA, M.I., dots., retsenzent; BUDNITSKAYA, R.S., kand. tekhn. nauk, retsenzent; VOLKOV, Ye.N., kand. tekhn. nauk, retsenzent; AREF'YEV, I.I., inzh., retsenzent; KHARITONOV, A.F., retsenzent; GUREVICH-GUR'YEV, Ye.S., retsenzent; KUZ'MINSKIY, M.M., retsenzent; INIKHOV, G.S., prof., retsenzent; KHOMUTOV, B.I., dots., retsenzent; BORODINA, Z.N., dots., retsenzent; BORISOVA, G.A., red.; MEDRISH, D.M., tekhn. red.

[Starch, sugar, honey, confectionery products, condiments, fats, milk, and milk products] Khrakhmal, sakhar, med, konditerskie, vkusovye tovary, zhiry, moloko i molochnye produkty. Moskva, Gos. izd-vo torg. litry, 1961. 750 p. (MIRA 14:7)

(Food industry)

BABIN, Ye.P.; MARSHTURA, V.P.; BORODINA, Z.S.; MARYSHKINA, L.I.

Thermodynamics of certain reactions of alkylation of toluene and conjugated alkylation of lower aromatic hydrocarbons. Ukr. Ukr. khim. zhur. 30 no.7:744-749 '64 (MIRA 18:1)

1. Institut organicheskoy khimii AN UkrSSR, Donetskoye otdeleniye.

MARSHTUPA, V.P.; BABIN, Ye.P.; KOLESNIKOV, I.M.; MARYSHKINA, L.I.; BORODINA, Z.S.

Solubility of propylene in aromatic hydrocarbons. Khim. prom. 41 no.8:585-587 Ag '65. (MIRA 18:9)

1. Moskovskiy institut neftekhimicheskoy i gazovoy promyshlennosti imeni akademika Gubkina.

BABIN, Ye.P.; MARSHTUPA, V.P.; RUDENKO, N.Z.; BORODINA, Z.S.; SIDORENKO, L.M.

Kinetics of the formation of isomers of isopropyltoluenes in toluene alkylation by propylene. Izv.vys.ucheb.zav.;khim.i khim.tekh. 6 no.5:787-794 '63. (MIRA 16:12)

1. Donetskiy meditsinskiy institut i Donetskoye otdeleniye instituta organicheskoy khimii AN UkrSSR.

BABIN, Ye. P.; BORODINA, Z. S.; KOMPANETS, V. A.

Alkylation of toluene by propylene in the presence of $AlCl_2 \cdot H_2PO_4$. Zhur. fiz. khim. 36 no.12:2768-2772 D '62. (MIRA 16:1)

1. Institut organicheskoy khimii, Donetskoye otdeleniye, Akademiya nauk UkrSSR.

(Toluene) (Propene) (Catalysts)

BABIN, Ye.P.; MARYSHKINA, L.I.; BORODINA, Z.S.

Disproportionation of mono-, di-, and triisopropylbenzenes. Neftekhimiia 4 no.1:21-25 Ja-F '64 (MIRA 17:6)

1. Institut organicheskoy khimii AN UkrSSR, Donetskoye otdeleniye.

BABIN, Ye.P.; RUDENKO, N.V.; SIDORENKO, L.M.; BORODINA, Z.S.

Effect of the temperature on the composition of cymene fractions during the alkylation of toluene by catalysts based on aluminum chloride. Zhur. prikl. khim. 38 no.5:1185-1188 My '65.
(MIRA 18:11)

BORODINETS, G.S.

S/181/60/002/007/021/042
B006/B060

AUTHORS: Pilat, I. M., Borodinets, G. S., Kosyachenko, L. A., Mayko, V. I.

TITLE: Some Properties of the System CdSb - ZnSb

PERIODICAL: Fizika tverdogo tela, 1960, Vol. 2, No. 7, pp. 1522-1525

TEXT: The physical properties of the system CdSb - ZnSb were already previously studied, but results differed, since the temperature conditions during the melting of the initial components were not uniform. Here, the authors report on new experiments made on five specimens (at a ratio of almost 1:1 of the initial components). The following were measured: temperature dependence of the electrical conductivity σ, the thermo-emf α, the Hall constant R, and the coefficient of thermal conductivity $\varkappa$ in the range from room temperature to 200°C. Fig. 1 shows the isothermal lines of thermal conductivity for five different temperatures as a function of the composition of the specimens investigated. The lower the temperature, the more marked is the maximum arising in composition 1. The numbers on the abscissa from 1 ... 5 denote the numbers of the specimens, whose composition is

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given in Table 1. Figs. 2 and 3 show the isothermal lines of $\varkappa$, α, R, and σ as well as of the activation energy (ΔE) as a function of the composition of the specimens, at 70°C (Fig. 2) and at 130°C (Fig. 3). In the composition 1 (i.e., 50% CdSb + 50% ZnSb) R, $\varkappa$, α, ΔE have a maximum, σ has a minimum. Of these specimens, microstructure and microhardness were also studied. For the analysis of microstructure the specimens were ground, polished, and etched with three different agents. The characteristic structure obtained for composition 1 is shown in Fig. 4, while Fig. 5 shows that of composition 2. Composition 1 exhibits inclusions of excess antimony. Microhardness for these inclusions amounted to 89 + 93 kg/mm^2 (which corresponds to the value for Sb); the main phase had a hardness of 154 kg/mm^2, which corresponds neither to that of the initial components nor to that of their binary compounds. Compositions 2 and 4 showed a microstructure corresponding to that of the eutectic. It can be concluded from the results that composition 1 forms an ordered solid solution or the chemical composition $ZnCdSb_2$. The results of an X-ray structural study (Table 2) led to the result that the phase arising with composition 1 possesses properties which considerably differ from those of the binary initial compounds. The authors finally thank V. I. Psarev, Candidate of Technical Sciences for his

Some Properties of the System CdSb - ZnSb

S/181/60/002/007/021/042
B006/B060

assistance in the metallographic analysis. There are 5 figures, 2 tables, and 5 references: 4 Soviet and 1 Czechoslovakian.

ASSOCIATION: Gosudarstvennyy universitet Chernovtsy
(Chernovtsy State University)

SUBMITTED: November 5, 1959

VC

Card 3/3

1268. MINING MACHINES. (GORNYE MASHINY). Borodino, G.P. (Moscow: Ugletekhizdat, 1956, 115pp.; abstr. in Ugol (Coal, Moscow), Oct. 1956, 48). A text book.

BORODINO, Leonid Stepanovich; YAGODIN, G.I., otvetstvennyy redaktor; ASTAKHOV, A.V., redaktor izdatel'stva; ANDREYEV, G.G., tekhnicheskiy redaktor

[Mining machinery; a textbook] Gornye mashiny; prakticheskie raboty. Moskva, Ugletekhizdat, 1956. 114 p. (MLRA 9:9)
(Mining machinery)

BORODINO, Leonid Stepanovich; TSARITSYN, V., prof., retsenzent; FEDOTENKO, A., retsenzent; AFONINA, G.P., red.

[Mining machinery; manual for practical work] Gornye mashiny; posobie dlia prakticheskikh zaniatii. Kiev, Tekhnika, 1964. 175 p. (MIRA 18:3)

[redacted], A., inzh.; POPOV, V., inzh.; [redacted], N., inzh.

Local binding materials in large-panel construction in [redacted].
Zhil. stroi. no.2:14-15 '64. (MIRA 18:11)

DANILOV, B.P., kand.tekhn.nauk; BORODITSKAYA, R.M., inzh.; GAVRILENKO, V.N., inzh.

Wall panels for coal concentration plants. Prom.stroi. 42 no.11:15-16 N '64. (MIRA 18:8)

1. Donetskiy Promstroyniiproyekt.

VINOGRADOV, A.; SPISOVSKIY, V.; BORODINSKIY, S., red.; YURGANOVA, M., tekhn. red.

[How to search for gold deposits] Kak iskat' zolotye mestorozhdeniia. Chita, Chitinskoe knizhnoe izd-vo, 1960. 28 p. (MIRA 14:10)
(Gold ores)

BORODITSKAYA, N. M., Eng.

Insulation (Heat)

Preparation and use of chlorinated "termoporit". Biul. stroi. tekh. 10, No. 6, 1953.

Monthly List of Russian Accessions, Library of Congress, June 1953. Uncl.

DANILOV, B.P., inzh.; BORODITSKAYA, R.M., inzh.; ZHUDOV, V.F., inzh.; BORISOVA, N.S., inzh.; MYASNYANKINA, T.V., inzh.; KIL'DEYEVA, V.Ye., inzh.

Shrinkage of air-entrained concrete without autoclave treatment. Stroi.mat. 8 no.1:38-40 Ja '62. (MIRA 15:5)
(Air-entrained concrete)

BARINOV, A.A.; BORODITSKAYA, R.M.; BORISOVA, N.S.; DANILOV, B.P.; MYASNYANKINA, T.V.; TOKAREV, G.I.

Single-layer slabs made of nonautoclaved air-entrained fly-ash concrete. Stroi. mat. 9 no.2:22-23 F '63. (MIRA 16:2)

1. Donetskiy nauchno-issledovatel'skiy institut nadshakhtnogo stroitel'stva Akademii stroitel'stva i arkhitektury UkrSSR (for Barinov, Boroditskaya, Borisova, Danilov). 2. Nachal'nik otdela novykh stroitel'nykh materialov Donetskzhilstroya (for Myasnyankina). 3. Nachal'nik Donetskogo domostroitel'nogo kombinata No.1 (for Tokarev).
(Concrete slabs) (Air-entrained concrete)

BORODITSKAYA, R.M., inzh.; ZHUDOV, V.F., inzh.; POPOV, V.V., inzh.

Using slag binding material in the production of products for large panel-type apartment house construction. Stroi. mat. 9 no.8:20-21 Ag'63. (MIRA 17:5)

Boroditskiy, I.M.

S/166/60/000/03/11/011
C111/C222

AUTHOR: Boroditskiy, I.M.

TITLE: Mean Temperature Coefficient of the Collimation of the Tashkent Meridian Circle

PERIODICAL: Izvestiya Akademii nauk Uzbekskoy SSR, Seriya fiziko-matematicheskikh nauk, 1960, No. 3, pp. 60 - 62

TEXT: The author uses observations of M.P. Bykov and own measurements for the calculation of the collimation for the Tashkent Astronomical Observatory. He mentions L.I. Semenov and A.A. Nemiro. There are 2 tables and 3 Soviet references.

ASSOCIATION: Tashkentskaya astronomicheskaya observatoriya (Tashkent Astronomical Observatory)

SUBMITTED: February 27, 1960

Card 1/1

L 9796-66 EWT(m)/EWP(w)/ETC(m) WW/EM

ACC NR: AP5028535 SOURCE CODE: UR/0286/65/000/020/0129/0129

AUTHORS: Spiridonov, V. M.; Boroditskiy, L. S.

ORG: none

TITLE: Vibration damping method using a vibration damping mass for metal constructions which form ship compartments. Class 65, No. 175836 [announced by Central Scientific Research Institute of Shipbuilding Technology (Tsentral'nyy nauchno-issledovatel'skiy institut tekhnologii sudostroyeniya)]

SOURCE: Byulleten' izobreteniy i tovarnykh znakov, no. 20, 1965, 129

TOPIC TAGS: vibration damping, shipbuilding engineering, ship component

ABSTRACT: This Author Certificate presents a vibration damping method using a vibration damping mass for metal constructions which form ship compartments. To decrease structural noise, the vibration damping mass consists of a thickened strip which serves as the joint between adjacent, compartment-forming elements such as decks and partitions (see Fig. 1). To decrease noise in compartments which are formed by cross-wise connected elements, a second version places the strip which represents the vibration damping mass at the cross-wise joint symmetrically with respect to the elements. To increase the impedance of a given joint between compartment-forming elements, a third version spaces the elements with thickened joints at a distance of $(30-40)\sqrt{\delta}$ where δ = thickness of wall.

Card 1/2 UDC: 629.12.011.22.—752.8

L 9796-66

ACC NR: AP5028535

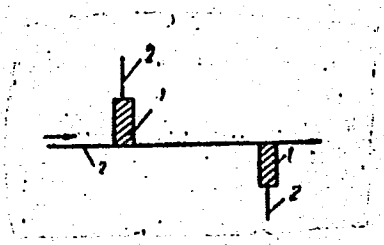


Fig. 1. 1 - Thickened strip;
2 - adjacent elements.

Orig. art. has: 1 figure.

SUB CODE: 13/ SUBM DATE: 03Feb64

Card 2/2

KOVALENKO, L.M.; PETRUSHIN, P.I.; BORODYANSKIY, M.B.

Sectional plate cooler for thermal phosphoric acid. Khim. prom. 41 no.10:783-785 O '65. (MIRA 18:11)

BORODITSKIY, N.P.

45. Dielectric characteristics of ferro-electric ceramics near the Curie point.—N. P. BORODITSKII and [illegible]. *J. tech. Phys., Moscow*, 22, 1920. [1952]

Borditskiy, N.N.

8(2), 9(6)

AUTHOR: Anisimov, V. I., Engineer SOV/119-59-3-13/15

TITLE: The Inter-university Scientific Conference on Electrical Measuring Instruments and on the Technical Means of Automation (Mezhvuzovskaya nauchnaya konferentsiya po elektroizmeritel'nym priboram i tekhnicheskim sredstvam avtomatiki)

PERIODICAL: Priborostroyeniye, 1959, Nr 3, pp 30-31 (USSR)

ABSTRACT: This Conference was held at the Leningradskiy elektrotekhnicheskiy institut im. V. I. Ul'yanova (Lenina) (Leningrad Institute of Electrical Engineering imeni V. I. Ul'yanov (Lenin)) in November 1958. It was attended by more than 500 representatives of universities, scientific research institutes, of the OKB, the SKB (Special Design Office), of industries and other organizations. More than 30 lectures were delivered in the meetings of this Conference. In opening the conference N. P. Boroditskiy underlined the outstanding importance of automation and of measuring technique for the development of national economy. N. N. Shumilovskiy in his lecture reported on "The Trends in the Development of Methods of Radioactive Control of Production Data" and outlined the extensive

Card 1/5

possibilities of using radioactive methods in such control. Ye. G. Shramkov and S. A. Spektor reported on a new method of measuring heavy direct currents with the help of the nuclear magnetic resonance. M. A. Rozenblat investigated problems of the application of magnetic amplifiers in automation and in measuring technique. A. V. Fateyev reported on the present-day state on the prospects of automatic control technique. Ya. Z. Tsypkin investigated some peculiar features of and the prospects offered by automatic pulse systems. The lecture by N. G. Boldyrev dealt with problems of stability of discrete automatic systems. V. B. Ushakov discussed the main trends in the development of mathematical analog computers and of computers designed for industrial use. The report by V. S. Ryabyshkin deals with an electronic analog correlator for the calculation of correlation functions in the investigation of winds in the ionosphere. R. I. Yurgenson reported on the most important methods, which guarantee both an active and passive freedom from disturbances in

discrete selective systems. Ya. V. Novosel'tsev discussed problems of averaging, differentiation, and balancing of time-dependent functions which can be represented by electric signals. V. P. Skuridin investigated new computing devices with polarized relays. A. V. Fremke and Ye. M. Dushin reported on instrument transformers for automatic instruments with automatic recording. V. B. Ushakov and N. N. Kopay-Gora reported on a computer for the automatic centralized control of production specifications. M. M. Fetisov discussed fundamental problems of the theory of automatic measuring instruments with an inverse conversion for the measurement of non-electric quantities. Ye. I. Tenyakov dealt with problems of the construction of automatic d. c. potentiometers with high accuracy. D. I. Malov discussed a high-precision automatic d. c. bridge for digital computations. The participants in the Congress listed below discussed the following subjects (which, however, are not given by the exact wording of the titles):

Card 3/5 V. A. Ivantsov: The planning of measuring elements for

accurate automatic quotient-type meters in digital computations. R. R. Kharchenko: Methods of determining the dynamic errors of a magnetic oscilloscope by simulation. P. P. Ornatskiy: Problems in measuring electric quantities at extremely low frequencies by electrical indicating instruments of various systems. L. F. Kulikovskiy: Novel types of a. c. compensators. A. S. Rozenkrants: Automatic bridges and a. c. compensators suited for the control of the parameters of condensers in series production. L. I. Stolov: Some characteristics of midget induction motors which can be used in measuring technique and automation. D. A. Borodayev: Ultransonic pressure- and liquid level gages. Yu. A. Skripnik: The circuitry of a phase-sensitive commutation indicator for a. c. semi-equilibrium bridges. N. F. Suvid: The application of instruments with magnetic bridges, which permit a considerable simplification of the design of the apparatus and the circuitry used in the measurement of non-electric quantities. V. A. Ferents: Method of increasing the sensitivity of oxygen gas analyzers. P. V. Novitskiy:

SOV/119-59-3-13/15

The Inter-university Scientific Conference on Electrical Measuring Instruments and on the Technical Means of Automation

Design of apparatus for measuring vibration quantities. V. V. Pasynkov: Main types of non-linear semiconductor resistors and possibilities of their application to circuitry in automation and measuring technique. G. N. Novopashennyy: Development of measuring amplifiers with semiconductor triodes. Ya. V. Novosel'tsev, N. A. Smirnov, Ye. Ye. Afanas'yev, Ye. P. Ugryumov: Precision semiconductor frequency meter operating according to the pulse-counting principle. P. G. Nikitin and A. Bezukladnikov: Methods of measuring the magnetic field strength by means of bismuth resistors and transducers operating on the Hall effect principle. A resolution was adopted by the closing plenary meeting of the Conference, which indicates ways of improving and coordinating scientific research work in the field of automation, electric measuring- and computing technique.

Card 5/5

AUTHOR: Borodiy, N.P., Norm-keeper at the mechanical workshop at the TsRMP of the imeni Dzerzhinskago Works.

TITLE: Machine for cutting refractory brick (stanok dlya rezki ogneupornogo kirpicha.)

PERIODICAL: "Metallurg" (Metallurgist), 1957, No. 1, p. 40 (U.S.S.R.)

ABSTRACT: A semi-automatic brick cutting machine developed at the Dzerzhinskii Works is described, in which the carborundum wheel is lowered and the carriage starts to advance on pressing the foot control. The motor is 1.7 kVA, the productivity of the machine is 300-350 normal magnesite brick and the wheel life averages 150 bricks.

1 sketch and 1 photograph.

BORODIY, N.P.

130-10-17/18

AUTHOR: Borodiy, N.P.

TITLE: Mechanization of Labour-consuming Operations in the Repair of the Chambers of Regenerative Soaking Pits (Mekhanizatsiya trudoyemkikh rabot pri remonte yacheyek regenerativnykh nagrevatel'nykh kolodtsev)

PERIODICAL: Metallurg, 1957, No.10, pp. 37 - 38 (USSR).

ABSTRACT: A brief description is given of a simple and reliable method for removing brick debris and waste matter from regenerative soaking pit chambers. The loaded containers (Fig.2) are removed with the aid of a single-cable hoist (Fig.1) and then of belt conveyors.
There are 3 figures.

ASSOCIATION: Works imeni Dzerzhinskiy (Zavod imeni Dzerzhinskogo)

AVAILABLE: Library of Congress.

Card 1/1

S/133/61/000/011/003/010
A054/A127

AUTHORS: Bortunov, Ye. M., Burkhan, G. N., Gavrilets, A. S., Borodiy, N. P., Engineers

TITLE: Surface defects of periodic sections produced by transverse-helical rolling

PERIODICAL: Stal', no. 11, 1961, 1005 - 1008

TEXT: In transverse-helical rolling on the 120-mm mill the metal is subjected simultaneously to torsion and expansion. Consequently, defects in the billets do not disappear during rolling but, on the contrary, they become even more pronounced. The main defects of the initial product being rolled are hair cracks, arranged in one line at diametrically opposed spots (10 - 15 mm in width) of the billet cross section, corresponding with the parting line of the rolls. This pattern of hair cracks is caused by the effect of the grooving and setting of the rolls. By taking certain measures, (changing the billet section, increasing the number of passes, etc.) the amount of hair cracks could be reduced to some extent in billets which had a diameter of less than 90 mm, whereas in billets with a diameter of 90 mm and more, the hair cracks could not be eliminated. To establish

Card 1/ 2

Surface defects of periodic sections...

the possibilities of removing the surface defects and the effect of various conditioning methods on periodic sections rolled on the '120' mill, tests were carried out on 90-mm billets by pneumatic scarfing, flame scarfing and by grinding, while these operations were also applied in combination. The tests showed that the defects could not be removed by pneumatic nor flame scarfing, because very characteristic defects were found at the places were these conditioning methods were used: films, laps appear on the periodic sections, irrespective of the kind of defect (cracks, hair cracks, laps, films) in the initial product. Grinding with strips 10 - 15 mm wide, on the four diametrically opposed sides of the billet corresponding with the parting lines of the rolls seemed to be the most effective way of conditioning periodic sections produced by helical rolling. Chipping should be used only in the case of the defects being deeper than 0.6 mm with subsequent grinding of the remaining defects. There are 6 figures and 3 Soviet-bloc references.

ASSOCIATION: Metallurgicheskiy zavod im. Dzerzhinskogo (Metallurgical Plant im. Dzerzhinskiy

S/130/61/000/002/002/005
A006/A001

AUTHOR: Borodiy, N. P., Senior Master

TITLE: Rolling Mill for Periodical Shapes

PERIODICAL: Metallurg, 1961, No. 2, pp. 23-24

TEXT: A three-high mill 120 for helical rolling of shapes with periodically changing cross section was developed under the direction of I. A. Tselikov, Corresponding Member of the Academy of Sciences USSR, and became operative in 1959 at the Metallurgical Plant imeni Dzerzhinskiy. A blank of up to 120 mm in diameter is preheated in an electric 500 kw induction furnace up to 723°C at 50 cycles frequency and 525 v, and from 723 to 1,250°C at 1,000 cycles frequency and 1,500 volt. The heating process is automatically performed and controlled with the aid of a relay-contact equipment. Electric power consumption per ton of heated metal is 400 kw.hr. A feeding table supplies the blank from the induction furnace to the mill spout. It is then placed by a pusher in the automatic clamps of a carriage through the open rolls. As the carriage moves the rolls approach each other or move away, clamping the blank and giving it the desired shape. (Minimum diameter, 40 mm). The rolls are placed at a 120° angle to each other and at a 45°

Card 1/3

Rolling Mill for Periodical Shapes

angle to the direction of rolling. The mill is controlled from a special hydraulic duplicating system. Fifteen different types of shapes are currently being rolled by this new method. Large amounts of metal can now be saved at machinebuilding plants.

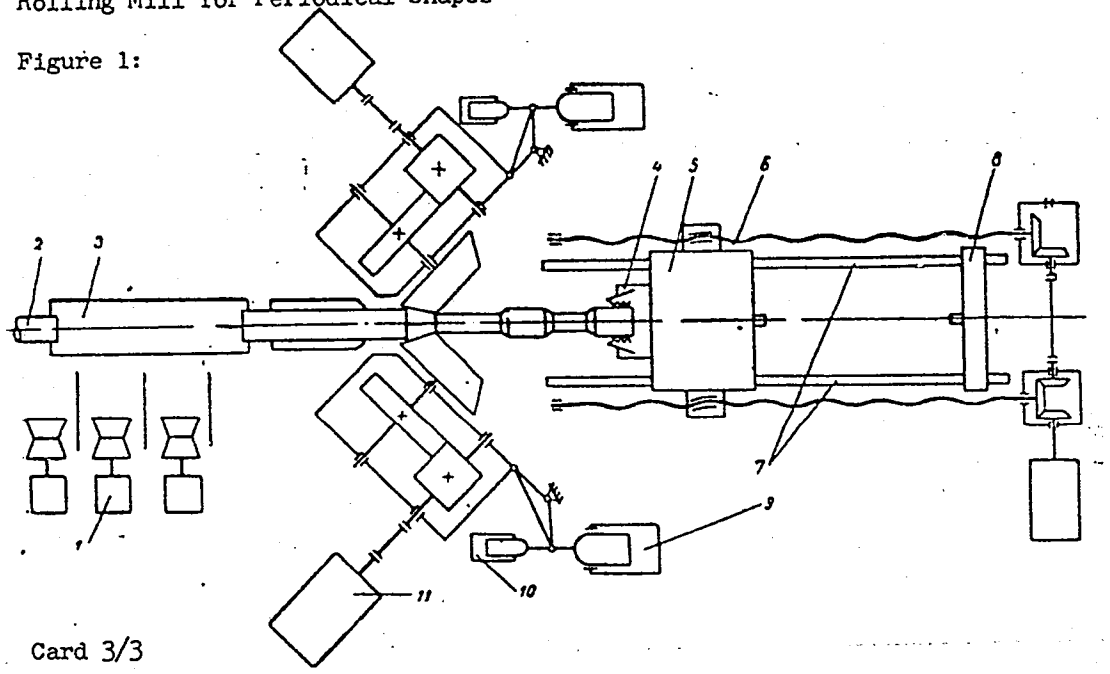
Figure 1. - Kinematic Scheme of Mill 120:
1 - feeding table; 2 - pneumatic pusher; 3 - spout; 4 - automatic chuck; 5 - carriage; 6 - lead screw; 7 carriage guides; 8 - adjustable stop; 9 and 10 - hydraulic cylinder; 11 - 180-kw motor.
There are 2 figures.

ASSOCIATION: Metallurgicheskiy zavod imeni Dzerzhinskogo (Metallurgical Plant imeni Dzerzhinskiy)

S/130/61/000/002/002/005
A006/A001

Rolling Mill for Periodical Shapes

Figure 1:



Card 3/3

[redacted], N.A., starshiy prepodavatel'

Device for determining the magnitude and sign of the static charge occuring in fibrous materials. Tekst.prom. no.2:72-74 F '63. (MIRA 16:4)

1. Kafedra fiziki Leningradskogo tekstil'nogo instituta imeni S.M.Kirova.
(Electrostatics) (Textile fibers—Electric properties)

BORODIYUK, N. A.

Dissertation: "Antibacterial Component in the Immunology of Diphtheria." Cand Med Sci, Acad Med Sci USSR, 6 May 54. (Vechernyaya Moskva, Moscow, 28 Apr 54)

SO: SUM 243, 19 Oct 1954

BORODIYUK, N. A. and MIRZOYEVA, N. M.

"The Epidemiology of Rat Rickettsiosis and Antimicrobial Components in Dysentery Immunology." Proceedings of Inst. Epidem and Microbiol im. Gamaleya 1954-56.

Personnel Identified as Participants in Scientific Conferences Held by the Institute in 1953. Inst. Epidem and Microbiol im. Gamaleya AMS USSR.

SO: Sum 1186, 11 Jan 57.

BORODIYUK, N.A.

Antimecrobial component in ammunity in diphtheria. Zhur.mikrobiol. epid. i immun. 27 no.4:42-46 Ap '56. (MLRA 9:7)

1. Iz Instituta epidemiologii i mikrobiologii imeni N.F.Gamelei AMN SSSR

(DIPHTHERIA, immunol.
immun., antimicrobiol component)

USSR/General Problems of Pathology - Pathophysiology of the Infectious Process U.

Abs Jour : Ref Zhur - Biol, No 2, 1959, 8654

Author : Borod[illegible]ak, N.A., Beletskaya, L.V.

Inst :

Title : Experimental Streptococcus Infection in the Light of the Role of the Streptococcus in the Pathogenesis of Rheumatic Fever

Orig Pub : Zh. mikrobiol., epidemiol. i immunobiol., 1957, No 10, 66-70

Abstract : Virulent cultures of the hemolytic streptococcus were repeatedly injected into rabbits intraconjunctivally and intravenously into rats. A part of the rats received DOCA simultaneously. In a considerable part of the animals a polypoid-verrucous endocarditis, myocarditis or aseptic arthritides were found. No Aschoff bodies nor sclerotic changes in the myocardium typical of rheumatic

Card 1/2

SMIRNOV, P.V.; BELETSKAYA, L.V.; BORODIYUK, N.A. (Moskva)

Morphological changes in experimental polyarthritis induced in white rats by β-hemolytic Streptococcus A. Arkh. pat. 21 no.9: 16-21 '59. (MIRA 14:8)

1. Iz laboratorii kokkovykh infektsiy Otdela ranevykh infektsiy (zav. - deystvitel'nyy chlen AMN SSSR prof. G.V.Vygodchikov) Instituta epidemiologii i mikrobiologii imeni N.F.Gamalei AMN SSSR (dir. - prof. S.N.Muromtsev).
(STREPTOCOCCAL INFECTIONS) (ARTHRITIS)

BOLOTINA, A.Yu.; GALACH'YANTS, O.P., kand.med.nauk; BORODIYUK, N.A., kand. med.nauk

Immediate results of bicillin prevention of rheumatic fever exacerbations. Sov.med. 23 no.12:94-99 D '59. (MIRA 13:4)

1. Iz 1-y kafedry terapii (zaveduyushchiy - deystvitel'nyy chlen AMN SSSR prof. M.S. Vovsi) TSentral'nogo instituta usovershenstvovaniya vrachey, bol'nitsy No.52 (glavnyy vrach P.S. Petrushko) i laboratorii streptokokkovykh infektsiy Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei (direktor - deystvitel'nyy chlen Vsesoyuznoy akademii sel'skokhozyaystvennykh nauk imeni V.I. Lenina (VASKhNIL) (prof. S.N. Murontsev).
(PENICILLIN rel.cpds.)
(RHEUMATIC FEVER ther.)

SMIRNOV, P.V. [deceased]; BELETSKAYA, L.V.; BORODIYUK, N.A.

Experimental streptococcal infection in Macacus rhesus monkeys; nature of rheumatic fever and rheumatoid diseases. Zhur.mikrobiol.epid. i immun. 30 no.5:61-66 My '59. (MIRA 12:9)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(STREPTOCOCCAL INFECTIONS, exper.
in monkeys (Rus))

MUROMTSEV, S.N.; NENASHEV, V.P.; BORODIYUK, N.A.; BASMANOVL P.I.

Quantitative determination of diphtheria anatoxin aerosol.
Zhur.mikrobiol.epid.i immun. 21 no.8:47-50 Ag '60. (MIRA 14:6)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(DIPHTHERIA) (TOXINS AND ANTITOXINS)
(AIR--MICROBIOLOGY)

BORODIYUK, N.A.

Method for the quantitative determination of small doses of diphtherial anatoxins. Zhur. mikrobiol. epid. i immun. 31 no. 5:19-22 My '60. (MIRA 13:10)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.
(DIPHTHERIA) (TOXINS AND ANTITOXINS)

S/016/60/000/05/06/079

AUTHORS: Muromtsev, S.N., Borodiyuk, N.A., and Nenashev, V.P.

TITLE: Experimental Inhalation Reimmunization With Diphtheria Toxoid. I.

PERIODICAL: Zhurnal mikrobiologii, epidemiologii i immunobiologii, 1960, No. 5, pp. 22 - 25

TEXT: Experiments were conducted to determine the efficacy of inhalation reimmunization after primary subcutaneous immunization with adsorbed diphtheria toxoid. Guinea pigs were reimmunized 5 1/2 months, and rabbits 3 months, after primary immunization, using highly concentrated toxoid prepared at the Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR (Institute of Epidemiology and Microbiology imeni Gamaleya of the AMN, USSR), containing 2,100 AU/ml. For reimmunization the animals were subjected to a concentration of from 1-20 AU/l for periods of from 10-60 minutes. A rise in the antitoxin titer to 118 AU for guinea pigs and 23 AU for rabbits was noted, the high titers persisting for 2 - 4 months. Reduction of the exposure to 10 - 20 minutes had no effect on the rise in the antitoxin titer, and a marked rise was noted in guinea pigs after an exposure of only 1 - 2 minutes. The results indicate that the method

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S/016/60/000/05/06/079

Experimental Inhalation Reimmunization With Diphtheria Toxoid. I.

should be tried out in field tests on humans. There are 2 tables and 8 Soviet references.

ASSOCICATION: Institut epidemiologii i mikrobiologii imeni Gamalei AMN SSSR (Institute of Epidemiology and Microbiology imeni Gamaleya of the AMN, USSR)

SUBMITTED: August 8, 1959

Card 2/2

MUROMTSEV, S.N. [deceased]; BORODIYUK, N.A.; NENASHEV, V.P.; ALESHINA, R.M.

In halation revaccination of children with diphtherial anatoxin. Zhur.mikrobiol. epid. i immun. 32 no.4:6-10 Ap '61. (MIRA 14:6)

1. Iz Instituta epidemiologii mikrobiologii imeni Gamalei AMN SSSR.
(DIPHTHERIA)

MUROMTSEV, S. N.[deceased]; GINDIN, A. P.; ANOSOV, I. Ya.; MAYOROVA, G. F.; BORODIYUK, N. A.

Morphological characteristics of the reaction of the body to inhalation immunization with bacterial antigens. Report No. 1: Morphological characteristics of pulmonary reactions to inhalation revaccination with diphtheria antitoxin and whooping cough vaccine. Zhur. mikrobiol., epid. i immun. 32 no.8:7-12 Ag '61. (MIRA 15:7)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(DIPHTHERIA) (WHOOPING COUGH) (LUNGS) (IMMUNITY)

MUROMTSEV, S.N. [deceased]; BORODIYUK, N.A.

Significance of the dosage of diphtheria anatoxin in primary inhalation immunization and reimmunization in experiments on animals. Zhur.mikrobiol.epid.i immun. 33 no.5:19-23 My '62. (MIRA 15:8)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

(DIPHTHERIA--PREVENTIVE INOCULATION) (TOXINS AND ANTITOXINS)

LYAMPERT, I.M.; BELETSKAYA, L.V.; BORODIYUK, N.A.; SMIRNOVA, M.N.

Antibodies reacting with human heart tissue in antistreptococcic rabbit serum. Zhur. mikrobiol., epid. i immun. 33 no.2:62-68 F '62. (MIRA 15:3)

1. Iz Instituta epidemiologii i mikrobiologii imeni N.F. Gamalei AMN SSSR.

(RHEUMATIC HEART DISEASE)
(SERUM) (STREPTOCOCCUS)
(ANTIGENS AND ANTIBODIES)

BORODIYUK, N.A.; GALACH'YANTS, O.P.; SMIRNOVA, M.N.; BOLOTINA, A.Yu.

Determination of streptococcal antigens in the blood of patients with rheumatic fever during the interparoxysmal period by the complement fixation reaction with rabbit antistreptococcal serum. Vop. revm. 3 no.4:8-14 O-D '63. (MIRA 17:2)

1. Iz otdela streptokokkovykh infektsiy (za. - doktor med. nauk I.M. Lyampert) Instituta epidemiologii i mikrobiologii imeni N. F. Gamalei (dir. - prof. A.P. Vershilova) AMN SSSR i revmaticheskogo kabineta Leningradskogo rayona Moskvy (nauchnyy rukovoditel' - prof. M.S. Vovsi [deceased]).

MEYOROVA, G.F.; BORODIYUK, N.A.

Effect of ultrasonic waves on whooping cough vaccine and diphtheria anatoxin; annotation. Zhur. mikrobiol., epid. i immun. 40 no.4:56 Ap '63. (MIRA 17:5)

1. Iz Instituta epidemiologii i mikrobiologii imeni Gamalei AMN SSSR.

BORODIYUK, N. L., Cand of Med Sci.

"On Antitoxic and Antimicrobic Immunity in Dysentery" (paper read at an unidentified scientific conference held by the institute during 1954) Proceedings of Inst. Epidem. and Microbiol. im. Gamaleya., 1954-56.

Division of Experimental Pathology of Infectious Diseases and Immunity, Zdrodovskiy, P. F., Active Member Academy of Medical Sciences USSR, head. Inst. Epidem. and Microbiol im. Gamaleya, AMS USSR.

SO: Sum 1186, 11 Jan 57.

RABINOVICH, M.S., kand. tekhn. nauk; GOLUBEV, V.A., gornyy inzh.; DORODKIN, A.F., gornyy inzh.

Reliability of mine automatic control equipment. Ugol' 38 no.12:41-45 '63. (MIRA 17:5)

1. Donetskiy filial Gosudarstvennogo proyektno-konstruktorskogo instituta avtomatizatsii rabot v ugol'noy promyshlennosti.

SOV/138-58-8-5/11

AUTHOR: Borodkin, A. I.

TITLE: Plans for the Manufacture of Car Tyres for Period 1959 - 1965 (Perspektivy proizvodstva avtomobil'nykh shin v 1959 - 1965 gg)

PERIODICAL: Kauchuk i Rezina, 1958, Nr 8, pp 23 - 25 (USSR)

ABSTRACT: At present fifty different types of tyres for cars, agricultural machinery, motor-cycles, etc. are manufactured in the USSR. During the May Conference of the Central Committee of the KPSS it was decided to double the output of the chemical industry by 1965 and to improve the properties of the manufactured goods. The output of large tyres, "Gigant", will constitute 70% of the total output by 1965. Proposed output figures for various special tyres are given. New tyres with improved load-and wear properties are to be manufactured, and new designs of tyres are to be developed. It is also planned to improve the properties of synthetic rubbers and viscose cords; for instance, sodium butadiene rubber will be substituted by isoprene rubber SKI. The quality of butadiene-styrene rubbers is to be improved. Cords made of the polyamide fibres "Kapron" will be used in the tyre industry, and the use of cords made of cotton fibres re-

Card 1/2

Plans for the Manufacture of Car Tyres for Period 1959 - 1965

stricted from 52% to 20%. It is planned to use a wider variety of types of carbon black. Improvements in the method of retreading tyres are suggested. During 1959 - 1965 the wear properties of tyres will be increased by 33% to 45%.

S/137/62/000/007/028/072
A052/A101

AUTHORS: Kovalevskiy, N. G., Chuyko, P. I., Arkhangel'skiy, A. M., Sadokov, G. M., Borodkin, A. I.

TITLE: Tests of cold drawing thin-wall stainless steel pipes on a short mandrel

PERIODICAL: Referativnyy zhurnal, Metallurgiya, no. 7, 1962, 34, abstract 7D201. (In collection: "Proiz-vo trub". Khar'kov, Metallurgizdat, no. 6, 1962 90 - 93)

TEXT: The investigations have proved the possibility of cold drawing thin-wall stainless steel pipes on a short mandrel with the coefficient of elongation of 1.35 - 1.49. These results are secured by the application of oxalate coating as a technological lubricant in combination with a double lubrication (5% ordinary soap solution plus a fifty-fifty mixture of castor oil and talc) and using a hard-alloy tool.

N. Yudina

[Abstracter's note: Complete translation]

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SOV/120-59-4-38/50

AUTHORS: Penchko, Ye. A., Khavkin, L. P., Borodkin, A. S.

TITLE: Production of Extremely High Vacua

PERIODICAL: Pribory i tekhnika eksperimenta, 1959, Nr 4, p 146 (USSR)

ABSTRACT: Some tests are reported on a sealed tetrode ionization gauge immersed in liquid helium at 1.9°K. The gauge is sealed off at 10^{-6} mm Hg; the limiting pressure recorded is about 3×10^{-9} mm Hg, and the approach to that limiting pressure is such as to indicate that two distinct groups of gases are involved. This residual pressure has two causes: 1) the filament heats the glass bulb and releases gas (this cause is removed by using a bulb consisting almost entirely of copper), and 2) the residual gas in the bulb (at 10^{-6} mm Hg), which is released when the stem

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Production of Extremely High Vacua

is sealed, contains sufficient He to correspond to a pressure of about 8 x 10^{-10} mm Hg. The paper contains 2 references, 1 of which is Soviet and 1 English.

SUBMITTED: May 22, 1958.

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000206430003-3"

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AUTHOR: Borodkin, A. S.

TITLE: Time of Appearance of Discharge in a Gaseous Discharge Manometer

PERIODICAL: Zhurnal tekhnicheskoy fiziki, 1960, Vol 30, Nr 3, pp 359-364 (USSR)

ABSTRACT: The time of rise of the current of an arbitrary gaseous discharge is usually divided into the time of discharge formation and the delay-time of the beginning of formation. Reykhrudel' and Smirnitskaya (Izv. vissh. uch. zav. (Radiofizika), 1, Nr 2, 45, 1958) investigated the time needed to establish the maximum current in a gaseous discharge manometer for two values of pressure. But the author wanted to investigate processes that take place in the space charge during the ignition of discharge and defined, therefore, two other times; (1) discharge appearance time, which is time from the moment of application of potential to the moment when

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current reaches a value not above $5 \cdot 10^{-9}$ a, irrespective of the value of the final stationary current, and (2) development time of a type of gaseous discharge which is the time from the moment of application of the potential to the moment when the discharge current reaches a certain small fraction of its final stationary value. The question was does the statistical distribution of the delay time, which is a monotonically decreasing function of time, determine the statistical distribution functions of the discharge development time. The two experimental tubes used are represented in Fig. 1. Electrodes were made of nonferromagnetic materials and, after degasing, the tubes were sealed off together with ionization manometers. Pressure of residual gases could be increased by heating metal parts of the tube and decreased by pulverising getters Times were observed by an oscillograph whose slave sweep was synchronized with the time of application of the potential across the tube. Figure 6 shows distribution functions for the appearance and development time

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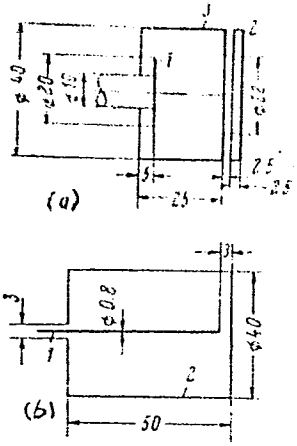

Fig. 1. Electrodes of experimental tubes. (a) Disc-shaped cathodes 1 and 2, and the cylindrical anode 3; (b) anode rod 1, introduced through the opening into the volume bounded by the cylindrical cathode 2.

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of the discharge in electrodes from Fig. 1a. Similar patterns were obtained in electrodes in Fig. 1b. The relative width of the maxima is quite insensitive to pressure, potential difference, and strength of the magnetic field. The author also presents curves of measured times versus applied potential (Fig. 7) and functional relationship between average development time and gas pressure (Fig. 8). The author notes measured appearance and development times are considerably longer than delay and formation times measured on most other types of discharges. He emphasizes that for both electrode configurations, appearance and development time show a maximum observable at all pressures, voltages, and magnetic fields close to those shown on various figures. The appearance of the maximum indicates, according to the author, the appearance of the discharge is not connected to some expectation of favorable combination of outside circumstances but corresponds to time during which some internal process takes place. Such a process could be appearance of

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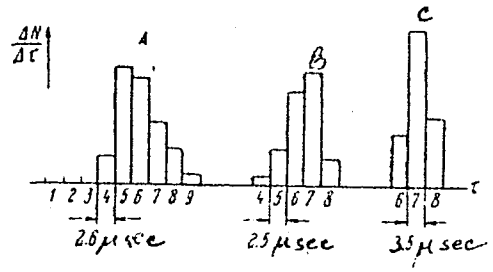

Fig. 6. Statistical distribution of the appearance and development times of a discharge for the tube in Fig. 1a. Pressure $5 \cdot 10^{-6}$ mm Hg. A is appearance time, potential 1,300 v, magnetic field intensity 1,000 oersted; B is development time of the discharge, potential 1,300 v, magnetic field intensity 1,000 oersted; C is development time, potential 1,700 v, magnetic field 1,200 oersted.

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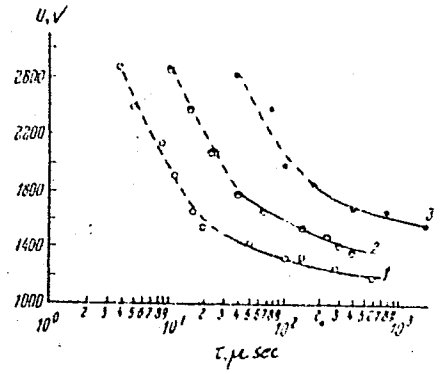

Fig. 7. Average appearance time (solid line) and development time (dashed line) of a discharge in the tube in Fig. 1 versus applied potential. Magnetic field intensity 1000 oersted; (1) pressure $5 \cdot 10^{-0}$ mm Hg; (2) pressure $2 \cdot 10^{-6}$ mm Hg; (3) pressure $5 \cdot 10^{-7}$ mm Hg.

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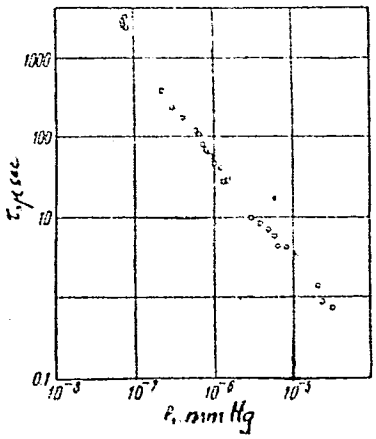

Fig. 8. Average discharge development time versus pressure in the tube of Fig. 1b. Potential 2,650 v, magnetic field intensity 640 oersted.

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Townsend avalanches. The inverse proportionality between the development time and pressure could be used for an objective estimate of the vacuum in some sealed-off vacuum devices. Such a vacuum-measuring method can be also useful when one wishes to limit the amount of discharge current going through the system. In such a case, the circuit can be opened after attaining currents harmless to the system. In addition, relation between development time and pressure gives insight into relation between gas pressure and maintaining time of the needed magnetic field. This last result could be obtained by feeding the solenoid by an A.C. or impulsive current. There are 8 figures; and 4 references, 3 Soviet and 1 German.

ASSOCIATION: None given

SUBMITTED: July 18, 1959

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S/057/61/031/005/011/020
B104/B205

AUTHOR: Borodkin, A. S.

TITLE: Motion of charge in the particular case of a static electromagnetic field

PERIODICAL: Zhurnal tekhnicheskoy fiziki, v. 31, no. 5, 1961, 582-587

TEXT: A study has been made of the motion of charge in an electric field which, in cylindrical coordinates, has the potential $\varphi = a(r^2/2 - z^2) + b\ln r + p$ and is superposed by a homogeneous magnetic field extending along the symmetry axis of the electric field. The components of the vector potential are given as $A_r = A_z = 0$; $A_\vartheta = rH/2$. The Lagrangian function of a charge in such a field reads

$$L = \frac{m}{2}(\dot{r}^2 + r^2\dot{\vartheta}^2 + \dot{z}^2) + ae\left(\frac{r^2}{2} - z^2\right) + be\ln r + pe - mr^2\dot{\vartheta}\omega, \quad (3)$$

where $\omega = eH/2mc$ symbolizes the Larmor angular velocity. As the azimuthal coordinate does not appear in the Lagrangian function,

$$\dot{\vartheta} = \omega\left(1 - \epsilon\frac{r_0^2}{r^2}\right); \quad \epsilon = 1 - \frac{\dot{\vartheta}_0}{\omega}, \quad (4)$$

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holds. r_0 is the distance from the axis at the instant t = 0. Eq. (3) leads to the equations of motion

$$m(\ddot{r}-r\dot{\vartheta}^2)=aer+\frac{be}{r}-2mr\dot{\vartheta}\omega, \quad (5)$$

$$m\ddot{z}+2aez=0, \quad (6)$$

of which (6) is known to have the solution $z = \alpha\sin(\mu t+\delta)$ (7), where $\mu = \sqrt{2ae/m}$ (7a). Next, the following integrals are deduced from Eqs. (4)-(6):

$$t=\int_{r_0}^{r}\frac{rdr}{\sqrt{C_1r^2-Ar^4-B+Dr^2\ln r^2}}+C_2, \quad (11)$$

and

$$\vartheta=\omega\int_{r_0}^{r}\frac{r\left(1-\epsilon\frac{r_0^2}{r^2}\right)dr}{\sqrt{C_1r^2-Ar^4-B+Dr^2\ln r^2}}+C_3. \quad (15)$$

(7) determines the z-coordinate of a moving particle, (11) gives the position of the particle on its trajectory at any instant, and (15) is the projection of the trajectory on the plane perpendicular to the symmetry axis. The quadratures of (11) and (15) can be expressed by elementary functions. The projection of the trajectory on the above-mentioned plane is found by numerical integration. Following this, the

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author deals with the conditions under which the projection of motion on the plane z = const will be finite. It is shown that for $A > 0$ and $D < 0$, the particle motion in a magnetic field that is strong enough for the hyperbolic part of a given elected potential will be finite, irrespective of the sign and amount of the logarithmic part of the potential. If $A = \omega^2 \geqslant 0$, the motion will be finite provided $H \neq 0$. For $A \leqslant 0$ and $D > 0$ it follows that the motion becomes infinite, and for $A < 0$ and $D < 0$ both cases are possible. If $A \leqslant 0$ and $D = 0$, the motion will be infinite. If the radial part of motion is finite, the period, T, of particle motion relative to the radial coordinate is determined from (11) to be

$$T = 2\int_{r_1}^{r_2} \frac{r\,dr}{\sqrt{C_1 r^2 - Ar^4 - B + Dr^2 \ln r^2}}. \qquad (21)$$

Furthermore, the integral

$$\Delta\vartheta = 2\omega \int_{r_1}^{r_2} \frac{r\left(1 - \epsilon \frac{r_0^2}{r^2}\right) dr}{\sqrt{C_1 r^2 - Ar^4 - B + Dr^2 \ln r^2}}, \qquad (22)$$

is obtained from (15) for the angle $\Delta\vartheta$ through which the particle is

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shifted within the period T. Of particular interest is the so-called critical field strength $H_{cr} = \frac{1}{e} 2mc\omega_{cr}$ at which the radial velocity component vanishes at a certain distance, r, from the z-axis. At $\dot{\vartheta}_0 = 0$ one finds

$$\omega_{кр.} = \frac{1}{r\left(1-\frac{r_0^2}{r^2}\right)} \sqrt{\frac{e}{m} ar^2\left(1-\frac{r_0^2}{r^2}\right) + 2\frac{e}{m} b \ln\frac{r}{r_0} + \dot{r}_0^2}. \quad (24)$$

This integral can be extended to $\dot{\vartheta}_0 \neq 0$. For the coefficients a and b in (1), the following relations are finally derived:

$$a = \frac{2V_{a.}}{\ln q\left(r_{a.}^2 - r_{к.}^2\right) - \ln\frac{r_{a.}}{r_{к.}}\left(q^2 r_{к.}^2 - r_{к.}^2 - 2z_1^2\right)}, \quad (26)$$

$$b = \frac{V_{a.}\left(2z_1^2 + r_{к.}^2 - q^2 r_{к.}^2\right)}{\ln q\left(r_{a.}^2 - r_{к.}^2\right) - \ln\frac{r_{a.}}{r_{к.}}\left(q^2 r_{к.}^2 - r_{к.}^2 - 2z_1^2\right)}. \quad (27)$$

The quantities of these expressions are given in Fig. 1. G. A. Grinberg and B. E. Bonshtedt are thanked for valuable comments. There are

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2 figures and 6 references: 3 Soviet-bloc and 3 non-Soviet-bloc.

SUBMITTED: June 1, 1960

Legend to Fig. 1: An example for the arrangement of electrodes used to generate fields corresponding to the potential (1).

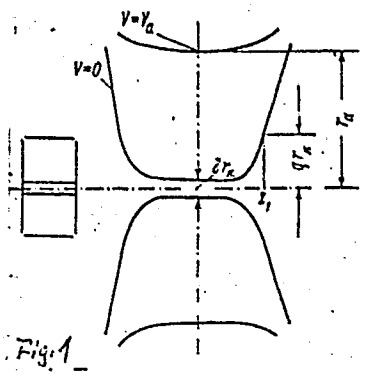

Fig. 1

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